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Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F.  
Larsen

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January 1947

## Test 390: Ellinwood Tiger Cat

Tractor Museum

University of Nebraska-Lincoln, [TractorMuseumArchives@unl.edu](mailto:TractorMuseumArchives@unl.edu)

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Copy of Report of Official Tractor Test No. 390

Dates of test: November 11, 1947 to December 1, 1947 and  
 April 8, 1948 to April 14, 1948  
 Name and model of tractor: ELLINWOOD TIGER CAT  
 Manufacturer: ELLINWOOD INDUSTRIES, Los Angeles, California  
 Manufacturer's rating: None

HORSEPOWER SUMMARY

	DRAWBAR	BELT
1. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	2.72	4.47
2. Observed maximum horsepower (tests F & B)	2.63	4.30
3. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly ASAE and SAE ratings)	2.04	3.80

REMARKS

No repairs or adjustments.

FUEL, OIL, and TIME

Fuel Gasoline      Octane 74\*      Weight per gallon 5.923 pounds  
Oil SAE No. 30      To motor 1.305 gal.      Drained from motor 0.702 gal.  
Total time motor was operated 50 hours

\* Octane rating taken from oil company's typical inspection data.

We, the undersigned, certify that this is a true and correct report of official tractor test No. 390.

L. F. Larsen  
 Engineer in Charge

C. W. Smith

F. D. Yung

L. W. Hurlbut  
 BOARD OF TRACTOR TEST ENGINEERS

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All results shown on pages 2 and 3 of this report were determined from observed data and without allowances, additions, or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, H, and J were made with an operating setting of the carburetor (selected by the manufacturer) of 100% of maximum belt horsepower.

B E L T   H O R S E P O W E R   T E S T S

Horse- power	Crank shaft speed  rpm	Fuel Consumption			Water used  gal per hr	Temperature		Barometer  Inches of Mercury
		gal per hr	hp-hr per gal	lb per hp-hr		Cool- ing med °F	Air °F	

TESTS B & C - 100% MAXIMUM LOAD - TWO HOURS

4.30	3198	0.536	8.02	0.738	Air Cooled	55	28.625
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\*TEST D - ONE HOUR

3.85	3200	0.552	6.97	0.849	Air Cooled	47	28.560
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

3.85	3201	0.557	6.91	0.857	Air Cooled	46	-- --
0.11	3543	0.218	0.50	11.727	---	45	-- --
2.00	3288	0.339	5.90	1.005	---	45	-- --
4.24	3069	0.527	8.05	0.736	---	46	-- --
1.05	3410	0.276	3.80	1.557	---	45	-- --
2.93	3200	0.446	6.57	0.901	---	45	-- --
2.36	3285	0.394	5.99	0.989	Air Cooled	45	28.520

\* Formerly called RATED LOAD; see HORSEPOWER SUMMARY 3, page 1.

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D R A W B A R   H O R S E P O W E R   T E S T S

Horse- power	Draw bar pull  lb	Speed  mph	Crank shaft speed  rpm	Slip on drive wheels  %	Fuel Consumption			Water used  gal per hr	Temperature		Barometer  Inches of Mercury
					gal per hr	hp-hr per gal	lb per hp-hr		Cool- ing med °F	Air °F	

Rear wheels, tires, and added weight used in Tests F, G, and H: Steel disc wheels; 5.50-16, 2 ply tires and 201 lb added weight per wheel.

TESTS F & G - 100% MAXIMUM LOAD - 1st GEAR

2.63	397	2.48	3195	6.35	-----Not Recorded-----				Air	58	28.845
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\*TEST H - TEN HOURS - 1st GEAR

2.19	316	2.60	3201	3.76	0.613	3.57	11.659	0.00	Air	47	28.900
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TEST J - OPERATING MAXIMUM LOAD

1.23	211	2.19	3205	19.45	-----Not Recorded-----				Air	65	28.850
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\* Formerly called RATED LOAD; see HORSEPOWER SUMMARY 3, page 1.

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TIRES, WHEELS and WEIGHT

		Tests F, G, & H	Test J
Rear Wheel; (each)	Type	Steel Disc	Steel Disc
	Liquid Ballast	61 lb	None
	Added Cast Iron	140 lb	None
Rear Tires;	No. Size & Ply	2 5.50-16 2 ply	2 5.50-16 2 ply
	Type of Tread	Sure Grip	Sure Grip
	Make	Goodyear	Goodyear
	Air Pressure	10 lb	8 lb
Height of Drawbar		14 inches	14 inches
Static Weight		780 lb	378 lb
Total Weight as Tested		780 lb	378 lb

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SPECIFICATIONS

Type Garden Tractor      Serial No. 47-T-1092      Drive V-Belt and chain  
Tread width; Rear 19 in to 28 in      Front -----  
Advertised speeds, miles per hour; First 2.5  
Belt pulley; Diam. 5 in      Face  $3\frac{1}{2}$  in      RPM 1600      Belt speed 2100 fpm  
Clutch; Make Ellinwood      Type Idler pully      Operated by hand  
    belt tightener

Seat None

Brakes None

Engine:

Make Own      Serial No. 6210      Type Single Cylinder - 45° angle  
Head L      Mounting Crankshaft      Lubrication Pressure feed & splash  
    crosswise  
Bore and stroke 2 5/8 in x 2 5/8 in      Rated rpm 3200  
Port diameter valves; Inlet 15/16 in      Exhaust 15/16 in  
Magneto; Make Bendix Scintilla      Model K 1-7  
Carburetor; Make Bendix Stromberg      Model 427078      Size 5/8 in  
Governor; Make Ellinwood      Type Fly Ball  
Air Cleaner; Make Air Maze      Type Oil bath  
Oil Filter; None